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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/915,683	08/21/1997	MUNEHISA FUJITA	Q38612-1	1847

7590

06/18/2002

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EXAMINER

WALKE, AMANDA C

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 06/18/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

MF-40

Office Action Summary

Applicati n N .

08/915,683

Applicant(s)

FUJITA ET AL.

Examiner

Amanda C Walke

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2002 .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____ .
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans et al (4,504,570) in view of either Tanemura et al (5,081,009) or Shuto et al (5,110,719) and Tsaor et al (5,210,013).

Evans et al teach core/shell tabular grains which may be used in direct positive internal latent image systems (column 9, lines 17-30). In the examples, emulsion B contains grains which have a crystal morphology as presently claimed. The "a" and "b" values claimed in the instant application are comparable to those values obtained from the emulsions of Evans et al. However, the primary reference does not teach the sulfur sensitizer as presently claimed, but does teach that suitable sensitizers include sulfur sensitizers (column 11, lines 22-46 and column 21, lines 14-31). It appears from the examples that it is preferable to prepare an emulsion that is fairly monodisperse. The examples prepare emulsions wherein the preferred grains of the reference comprise greater than 85 % of the total grain projected area meaning that less than 15% of the total grains are not of the preferred thickness, diameter, and aspect ratio.

Tsaor et al is relied upon solely for its teaching of silver halide grains having a very low coefficient of variation. The reference teaches that it is important to control the variances in thickness of tabular grains as well as the variances of the diameter (ECD) (column 3, lines 1-54,

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column 5, lines 12-31, and lines 53-67). Emulsions comprising grains having a low COV result in improved photographic properties such as higher sensitivity (column 1, lines 23-65).

Given the teaching of Tsaur et al that it is advantageous to prepare an emulsion having not only a low COV of the grain diameter but also a low COV of the grain thickness, it is the position of the examiner that one of ordinary skill in the art would have been motivated to prepare the mainly monodisperse emulsion of Evans et al (wherein greater than 85% of the total grain projected area comprises grains having the preferred thickness, diameter, and aspect ratio) wherein the grains would have a COV of the grain thickness of less than 30%.

Either Tanemura et al or Shuto et al disclose sulfur sensitizers that have the presently claimed structures (A), (B), or (C). These sensitizers are specifically claimed to be useful for core/shell internal latent image silver halide grains. These compounds are disclosed to provide high sensitivity, low D_{\min} , and high D_{\max} in silver halide emulsions (See especially Tanemura et al column 2, line 62 to column 3, line 5 and the claims and Shuto et al column 2, lines 5-9 and the claims).

It would have been obvious to incorporate the sulfur sensitizers of either Tanemura et al or Shuto et al in the grains of Evans et al since the secondary references specifically teach the use of the sulfursensitizers in the type of grains taught by Evans et al with reasonable expectation of achieving core/shell tabular grain emulsion which will have an increased sensitivity and D_{\max} and decreased D_{\min} .

Response to Arguments

3. Applicant's arguments filed 4/25/2002 have been fully considered but they are not persuasive.

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Applicant has amended claim 1 to include the limitations of the canceled claim 8 and submitted new declaration evidence in the response filed 4/25/2002.

Applicant has argued that the new declaration evidence demonstrates unexpected results. Applicant has specifically argued that samples 13 and 14, 17 and 18, and 21 and 22 show unexpected results in a higher D_{\max} , lower D_{\min} , higher in middle sensitivity, and unexpectedly remarkably lower in negative sensitivity. After considering the evidence, the examiner found that it was not persuasive. Firstly, the present claim one requires that the COV of the total grain thickness is less than 30 %, not the COV of the thickness of the shell as reported in Table 1 on page 7 of the declaration. These are different measurements. In fact, it appears that a 43% COV in the shell thickness may fall within the range of less than 30% COV in grain thickness. Additionally, a and b appear to all be within the scope of the present claim limitations. The column labeled "amount of compound A" appears that it should read "amount of compound A, B, or C" since compounds 2-3 and 3-5 are not within the scope of compound A, but of compounds B and C. Also, there is no direct comparison between samples having AgBr cores and AgBrI cores. There is no sample having a AgBr core having the same amount of added compound as a sample having a AgBrI core and no control sample of an emulsion having AgBr cores wherein the amount of added compound is zero.

Additionally, applicants have not addressed points raised by the Board in its decision of 1/24/2002. As noted by the Board on page 10 of the decision, the improved results in D_{\max} and D_{\min} may be explained by the presence of silver iodide in the core of certain samples because Tanemura et al and Shuto et al teach that silver iodide should be avoided in obtaining a high contrast direct positive image, and an increased amount of thiosulfonate would also reasonably

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explain the difference in properties. Also, even though the references are silent with respect to the negative sensitivity, it reasonably appears that the caution with respect to the presence of silver iodide in the core when using thiosulfonates taught by Tanemura et al and Shuto et al would extend to other properties of the emulsion, including that of obtaining a high contrast direct positive image. The Board stated that the applicants did not submit a scientific explanation or other objective evidence which establishes the practical significance of the D_{max} , D_{min} , and negative sensitivity data in light of the teachings of the secondary references and the increased amount of thiosulfonate compound. The present declaration does not address this finding as declarant declares that the results are "unexpectedly remarkably lower in negative sensitivity". This does not constitute a scientific explanation or evidence (*In re Lindner*, 457 F.2d.506, 508, 173 USPQ 356, 358 (CCPA 1972)).

Additionally, the scope of the evidence is still lacking for the reasons noted by the Board on page 12 of their decision.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 703-305-0407. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9792 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


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ACW

June 12, 2002

Amanda C Walke
Examiner
Art Unit 1752


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